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ABSTRACT

This report examines the relationship between the organizational climate (as measured by the Organizational Climate Description Questionnaire of Halpin and Croft--1966) and the organizational structure (in the context of the bureaucratic construct of Weber--1947) of elementary schools. The study postulated that the organizational structure of a school was a variable that would co-vary with a school's organizational climate. Interviews with school principals, and questionnaires distributed to 137 elementary schools in Washington State were used to collect data. Through statistical analysis, a number of significant but low-order single and multiple correlations were obtained. These correlations supported the general hypothesis, but represented explained variance of such low magnitude as to make either generalizations or detailed discussion of implications futile. (Author)

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THE ORGANIZATIONAL CLIMATE AND ORGANIZATIONAL STRUCTURE OF ELEMENTARY SCHOOLS

ED 043138

a
study by

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The purpose of this research is to examine the relationship between the organizational climate as measured by the Organizational Climate Description Questionnaire of Halpin and Croft (1966) and organizational structure in the context of the bureaucratic construct of Weber (1947) of elementary schools.

The Organizational Climate Description Questionnaire

The OCDQ (see appendix A) is a sixty-four item Likert-type instrument which the teachers and principal of an elementary school respond to by indicating how well each item describes their school. The items of the questionnaire describe what is called "typical" behaviors of teachers and administrators and the instrument actually measures reported frequency of perception.

The sixty-four items of the questionnaire are randomly ordered but can be brought together in eight subtests. The names of the eight subtests are:

Characteristics of the group (teachers)

1. Disengagement
2. Hindrance
3. Esprit
4. Intimacy

Behavior of the leader

5. Aloofness
6. Production Emphasis
7. Thrust
8. Consideration

From the scores on the eight subtests a profile is constructed for each school and by comparing the profiles of different schools the distinguishing features of their respective Organizational Climates are identified.

From the above, six Organizational Climates are identified and arrayed along a continuum ranging from an Open Climate at one end to a Closed Climate at the other. The categories of the climate continuum are:

The climate continuum in order

1. Open
2. Autonomous
3. Controlled
4. Familiar
5. Paternal
6. Closed

It should be noted that there is some ambiguity in rank-ordering adjectives along either an integral or ordinal continuum. The words used are highly loaded in a connotative sense and different people tend to respond to these words in different ways. The tendency to value judge these words is difficult to avoid and may not be desirable. This fact is best noted by Halpin's statement,

> The continuum that we devised does not possess porcelain perfection; it has a few chips and nicks along the edges. Specifically, it is not quite fair to say that the six climates can be ranked on this continuum; at best, they can be arrayed in respect to it. Yet, for heuristic purposes, in conducting the research by which the OCDQ was constructed, we treated the data as if the climates could be ranked.[1]

The items for the eight dimensions of Organizational Climate are identified by factor analysis. The items which load on each of the eight dimensions are assigned to the eight subtests and the results of this loading technique reveal, through iterative cluster analysis and factor analysis, the eight dimensions which are used as indexes of the Organizational Climate of an elementary school. In computing each respondent's eight subtest scores the item scores, subtest by subtest, are summed and divided by the number of items in that subtest. This quotient is rounded off to a two digit figure. The mean and standard deviation for each subtest is determined across all respondents and is then converted to an arbitrary mean of 50 and standard deviation of 10.[2]

Halpin stresses the point that the OCDQ is a heuristic test and that the true measure of its value comes from its being able to generate hypotheses which can be tested and then contribute to a nomological network which in turn supports the construct validity of the taxonomy.[3]

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[1] Andrew Halpin, Theory and Research in Administration (New York: The Macmillan Co., 1966), p. 134.

[2] As will be seen later, the same arbitrary mean and standard deviation was used in the Organizational Structure Description Questionnaire. This was done for convenience of analysis.

[3] Ibid., p. 225.

The lead for the development of the OCDQ came from the research on leader behavior of Halpin and basically followed the same format used in the development of the Leadership Behavior Description Questionnaire.[4] Originally consideration was given to the use of a forced choice-type questionnaire, but this idea was rejected on the grounds that it would have to be of such length as to reduce to cooperation of the teacher to whom it was to be administered.

The research was started by building a bank of 1000 items of the type found in the present 64 item questionnaire. The items were screened by constructing and actually testing three preliminary forms of the OCDQ. Part of the original screening of items involved logical face-validity decisions based on expertise. The third form contained 80 items, but subsequent analysis indicated that the number could be cut to the present 64 items. Much of the original bank of 1000 items was obtained by simply asking teachers what sort of things went on in their school. In actuality the original 1000 items were drawn from the same group of teachers upon whom they were eventually to be used. Whether or not the final list comprised an effective and unbiased instrument was established through the use of highly sophisticated statistical procedures.

OCDQ Research

One widly accepted measure of the value of an instrument such as the OCDQ is just how seminal it has been. True, this is a pragmatic test and does not necessarily directly reinforce the logico-deductive validity of the instrument. But the OCDQ has been seminal both in terms of numbers of related research and varities of research. These kinds of observations strongly suggest that other researchers have found the OCDQ to be a stimulus to further investigation and if we can further suggest that this research has not been instigated uncritically we are forced to conclude that the OCDQ is an instrument of some value.

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[4] The LBDQ grew out of a research project under contract with the U. S. Air Force conducted at Ohio State University between 1950-55. It is covered in Halpin, Ibid., Chapter 3.

Research both critical of and supportive of the OCDQ has come from two general areas; one is research specifically directed towards further verification of the efficacy of the instrument; and the other is research which has used the OCDQ in conjunction with other variables in which efficacy was incidental to the study.

Probably the most significant research project of a verificational nature is the one done in 165 Alberta Schools.[5] Andrews reports on the results of the study and indicates some practical implications in The CSA Bulletin.[6] Andrews concludes that there is high face validity in the titles and definitions of the subtests of the OCDQ. He says that "it is speculated that most administrators would approve of high scores on Esprit, Intimacy, Thrust, and Consideration. They would approve of low scores on Disengagement and Hindrance and would be somewhat uncertain about Aloofness and Production Emphasis."[7] It could be argued that such a point as the above should not be considered in the present context. Yet, if we agree with Halpin that climate is to organizations as personality is to persons it would seem fatuous in the least to omit such observations.

Probably the most significant aspect of both the research and report of Andrews is summed up in the following statements:

> ....present evidence indicates that the subtest scores are good measures of the concepts they purport to measure. Thus it seems reasonably safe to judge the desirability of the various subtest scores by the descriptions given in the manual of the concepts involved.
>
> This does not appear to be the case, however, for the Climate categories. The present study found no meaning which could be attached to the named Climate categories that added anything to the meaning already present in the subtest scores. Furthermore, the central concept of Organizational Climate was concluded to be somewhat misleading in the breadth it suggested. If Organizational Climate is defined as the overall character of social interaction within the organization, then clearly the breadth of the concept exceeds the limits of what is measured by the OCDQ.[8]

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[5]John H. M. Andrews, "Some Validity Studies of the OCDQ." (mimeographed paper presented at the conference of the AERA, 1965).

[6]John H. M. Andrews, "What School Climate Conditions are Desirable?" The CSA Bulletin, IV, No. 5 (July, 1965), pp. 7-21.

[7]Ibid., p. 19.

[8]Ibid., p. 9-10.

The question of the value of the subtests of the OCDQ and of the climate categories is being settled through additional research and conjecture, and is a recurring theme in many studies.

McFadden (1966) employed the techniques of the non-participant observer in rating schools. McFadden found higher consistency between the observations and the subtest categories than between the observations and the climate categories. Roseveare (1965) subjected a sample of schools to the same statistical procedures used by Halpin and found similar findings on the subtests Thrust and Esprit.

In related research Anderson (1965, Feldvebel (1964), Emma (1964), Nicholas (1965), Otto and Veldman (1966), Watkins (1966), and Hinson (1965) all used the OCDQ in conjunction with other variables. In each case, no matter what the outcome of the basic research, further support of the subtest categories of the OCDQ was indicated and there was a general indication of the value of the OCDQ with some reservations about the climate categories. On the basis of this evidence and the findings of Ranyard (1967) in the pilot study for this research it is concluded that this research will focus mainly on the subtests of the OCDQ.

The Organizational Structure of Schools

A school may be thought of as a subculture imbedded in the larger culture. As such it is, at one and the same time, an independent entity and an extension of the culture of which it is a part. To fully understand a school in all of its complexity it must be considered in the latter context and yet we must grant that the subculture itself both mediates the behavioral predispositions of the members of the group and provides stimuli which uniquely determine response patterns. As a subculture, organizational climate is presented by Halpin as a way of talking about the "personality" of the group. Talcott Parsons (1956) suggests that the structure of organizations may be analyzed from the point of view of the organizational culture. Implicit in this consideration is the superordinate-subordinate relationship as represented by the principal-teacher dyad. While both the teachers and principal function within the parameters set up by whatever prescriptions there are for the formal organization of the school, it is one of the principal's primary responsibilities to interpret and implement these prescriptions. And even in

the slim likelihood that the principal of a school might have absolute autonomy, it is not unreasonable to suggest that he would tend to follow some already established pattern of organizational structure. The point being that the principal of a school both interdicts and interprets the formal organizational structure in which the school functions. It would follow, then, that if we could find two schools which appeared descriptively to be patterned after the same model of organizational structure that they would still be found to have measurable differences as a function of the principal's interdiction and interpretation. Also, it would make no difference whether the principal was aware of the existence of a model of organizational structure or not. This follows as it follows that a man does not have to be able to verbalize the nature of cultural patterns to function in accord with a culture model. As a subjective observation this researcher has come to the strong conclusion that most public school principals are not in the least conscious of the theoretical influences that have caused schools to be organized the way that they are. While it would contribute nothing to our knowledge about schools this observation can be subjected to a simple study: Suggest to a sample of school administrators that they head up a bureaucratic organization and then count the frequency of "hot denials." Nevertheless, the documentation of the structuralist's influence on public school organizational structure is well known to any student of school administration. It is held in this research that, in spite of the emerging collegial concept, the bureaucratic construct of Max Weber is the basic model for public school organization.

At some point in the growth in size and complexity of any organized activity of man there comes a time when it becomes essential to recognize that the goals associated with the organization are inexorably bound up

with how the organization is structured. That is, the formal organization itself becomes an object of conscious consideration, and time, money, and energy are devoted to building an organizational framework within which the organization goes about its primary activity of implementing its goals.

It would be naive, at best, to imply that this indicated recognition comes about at any given specified moment in time. On the contrary, it is more likely that organizations that start out in some humble manner (as our public schools did) and then grow in size and complexity tend to fall into a pattern of casual organization that may serve their purposes quite well and may never produce the dysfunctional stimuli which would tend to cause the persons involved in the organization to question the efficacy of the formal structure of the organization. On the other hand, there exists the likelihood that the dysfunctional aspects of the formal organization may not even be recognized, and that the organization could tend to follow its accidental organizational structure without question. It is suggested that this latter form of behavior is less likely to occur in organizations which are motivated by profit. Falling profits are a strong stimulus to remedial activity in profit motivated organizations whether they be owned by single individuals, groups of private persons, or large groups of stockholders. In any case the siren call of more income, whether it be corporate or individual, is a compelling tune and has moved modern American business to attempt to optimize many aspects of its activities, including how it is organized.

Schools, as social institutions, exist to serve particular purposes. And, while their "profit" index may not be as obvious as the dollar sign, familiarity with the popular press reveals considerable pressure from all sides to do "new" things, to do things which are now being done "better", or, in a word, to "change." Schoolmen have tended to respond to the pressure for change by either "tinkering" with the various aspects of schools or by adapting ideas and theories from other kinds of organizations of their needs.

The need to formally organize schools around some model of organizational structure has closely paralleled, in its development, that of American business. The classic case, presented by Callahan (1962), depicts the American school with a business company heritage from which it

is still extricating itself. The pervasive influence of Taylor's efficiency, "man the machine" model, is still manifest in today's schools, and is frequently followed by administrators who may not even be aware of the writings of Frederick W. Taylor on Scientific Management. In the same classical administration theory school there is, in high school departmentalization, the vestiges of the division of labor approach promulgated by such theorists as Gulick and Urwick,[9] and following this the human relations approach which takes its historical starting point from the Hawthorne Studies of Roethlisberger and Dickson,[10] and is still manifest in the "one big happy family" emphasis that anyone who has taught in the public schools knows so well. The significance of these presentations rests in the fact that these theories were developed in and for the world of business and that American education, by drawing from them, demonstrated a need to deliberately structure its activities along lines that were designed to answer the pressure for change; most particularly to answer the demand for greater efficiency that was stimulated by rising educational costs, increased enrollment and broader curriculum offerings.

With the drift away from the essentially mechanistic approach to organizational theory has come a concomitant drift towards a social science orientation and an increasing recognition of the obvious fact that organizations are made up of people interacting in a complex environment which is at one and the same time a separate entity and part of the larger organization known as society. It remained for the structuralists, and in particular Max Weber, to articulate this theory of organizational structure which has come to be known as the bureaucratic construct.

Campbell (1965) sees the bureaucratic model as the logical effect of the stimulus of growth and complexity of school systems. He indicates, further, that this may be the most desirable direction for organizational

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[9] Amitai Etzioni, Modern Organizations (Englewood Cliffs, N.J.: Prentice Hall, Inc., 1964), p. 22.

[10] Ibid., p. 33.

structure to take. Moeller and Charters measured the degree of "bureaucratization" of school systems and found that teachers had a greater "sense of power" in more bureaucratic school systems.[11] While Blau and Scott (1962) recognize the dysfunctional aspects of bureaucratic organizations, particularly with respect to the fact that it tends to ignore the informal aspects of organization, they do indicate that bureaucracy is the most efficient form of administrative organization in that it maximizes rational decision-making. This same theme is repeated by March and Simon (1963) in that, while they accept the premise of the high rationality of the bureaucratic model and credit it for a pervasive influence on organizational structure, they also indicate that rigid adherence to the model tends to leave out the character of the human organism. Blau (1956) has conducted a number of research inquiries into the relationship between the bureaucratic model and organizational effectiveness. Blau's findings tend to support the position that the bureaucratic structure is one of the "best" ways to get the job done, and represents the rational approach to organization suggested by Weber.

The evidence cited is far from complete but does represent a representative sampling of thinking about the organizational structure of schools. Two observations do stand out. One is that the Weberian bureaucratic construct is the most pervasive influence on the organizational structure of schools. The second is that, in spite of some shortcomings, this may be the "best" way to do things. Weber considers bureaucracy ".....superior to other historically known forms of administration, because of its stability, reliability, the calculability of results which it permits, and the large scope of its operation."[12]

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[11] Gerald H. Moeller and Willard W. Charters, "Relation of Bureaucratization to Sense of Power among Teachers," Administrative Science Quarterly, X, No. 4 (March, 1966), pp. 444-465.

[12] Max Weber, Essays in Sociology, trans. and ed. Hans H. Gerthe and C. Wright Mills (New York: Oxford University Press, 1947), p. 214.

Consideration of the concepts of the Weberian construct reveals that they are broad enough to both permit and require that they be translated in the context of the particular organization being considered. In the context of schools Bishop presents the following parallelism developed by Moeller and Charters:

SCHOOL SYSTEM CONCEPT	RELATED WEBERIAN CONCEPT
1. Uniform course of study	Retional, impersonal standards
2. Communication through established channels	Hierarchy of authority
3. Uniform hiring and dismissing procedures	Appointment by impartial criteria
4. Secure tenure for teaching personnel	Maximum vocational security
5. Explicit statement of school policies	System of abstract, impersonal rules
6. Clearly delimited areas of responsibility	Clear-cut division of labor
7. Specific lines of authority	Hierarchy of authority
8. Standard salary policies for teachers	Incremental salaries and regular procedures for promotion

[13]

Of particular interest in the research of both Bishop and Moeller (1962) is the fact that the researchers had developed the arguments for their hypotheses in negative terms based on consideration of the dysfunctional aspects of a bureaucratic organization. In both instances the findings led, not only to rejection of the hypotheses, but to acceptance of an alternate hypothesis: there was a positive rather than a negative relationship. Their findings tended to reinforce the "rational-legal" position taken by Weber both in the area of "getting the job done" and in meeting the needs (sense of power) of the members of the organization.

Ranyard (1967) conducted a research with twenty-six elementary schools using the OCDQ and an Organizational Structure Description Questionnaire. The OSDQ was constructed on the basis of considerations of the Weberian construct, and was a thirty-six item Likert-type questionnaire. Both the OCDQ and the OSDQ were administered to the teaching staffs of the schools.

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[13] Lloyd K. Bishop, "Bureaucracy and the Adoption of Educational Innovation" (unpublished doctoral dissertation, Claremont Graduate School, 1966), p. 10.

In this research it was postulated that the organizational structure of an elementary school was a variable that would co-vary with the school's organizational climate. To test this postulate teachers' perceptions of the organizational structure were measured by the use of the paper-and-pencil interview schedule identified as the Organizational Structure Description Questionnaire (OSDA). Specifically, it was hypothesized that a significant portion of the variance found in the organizational climate of schools was a function of variance in the organizational structure. While the hypotheses of the research were not supported by the data several ancillary findings were made that have primary relevence to this research.

Organizational Structure

In the above research by Ranyard, as in this research, it was held that a significant influence on the organizational structure of schools was the Weberian construct. The thirty-six item Likert-type questionnaire was constructed to measure teachers' perceptions of this structure. The basic assumption was that there would be a significant variation from school to school in the degree to which they conformed to this model. It was found that, while there was considerable variation in the climate scores of the schools sampled, the schools tended to cluster on the scores on each of the ten criteria of Weber and that either the schools of the sample were, in fact, structured so much the same that it was not possible to find measurable differences or that the teachers of the schools were not conscious enough of the differences to be able to articulate them.[14] The latter conclusion seemed more likely on the basis of the logical reasoning that schools must differ in the degree to which they conform to the Weberian construct and the fact that the lack of a significant difference in the mean scores resulted, statistically, from large standard deviations rather than from means that did not differ. In turn, these large standard deviations led to the observation that the teachers were not able to identify the variables of organizational structure.

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[14] Redge Ranyard, "The Organizational Climate and Organizational Structure of Elementary Schools" (unpublished doctoral dissertation, Claremont Graduate School, 1967), p. 55.

Holding to the premise that schools do, indeed, vary in their organizational structure it becomes necessary to suggest other methods of measuring this variability. One way would be to design a highly sophisticated questionnaire to once again be administered to the teachers. For this research this idea was rejected for the above stated reasons and the obvious fact that the design of a reliable instrument is an extensive project in its own right. Another method would be to send trained, non-participant observers into the schools to rate the organizational structure. Since the data for this research was collected throughout the state of Washington this would have been an obviously impractical approach. The method chosen for this study was to go directly to the principal of each school involved for his own perceptions. The method employed will be described later in this report.

Theoretical Considerations and Hypotheses

Examination of the literature as it relates to the Weberian construct leads to several significant considerations. On the one hand bureaucracy is presented as a rational-legal approach to organizational structure providing a framework for efficient decision making and an effective mechanism for adaptation to changing needs. Weber has indicated that the very stability of a bureaucratic structure represents a focus of permanence from which the members of an organization can draw a sense of continuity. He also says that it is superior in knowledge and thereby provides the worker the best outlet for his specialized skills and talents.[15] On the other hand certain dysfunctional aspects of the bureaucratic structure receive their share of attention. In the context of this research the most significant factor is the lack of a conceptual link between organizational climate and organizational structure. In fact, while Weber is frequently identified as the first structuralist, the most persistent criticism of his theory of organization is that it focuses too strongly on rational-legal factors to the exclusion of considerations of human factors.

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[15] Max Weber, "The Essentials of Bureaucratic Organization: An Ideal-Type Construction," Reader in Bureaucracy, ed. Robert K. Merton et al. (Glencoe, Ill.: The Free Press, 1952), pp. 18-27.

The advantages of being able to establish a conceptual link between two concepts are obvious. Not the least of these advantages is the fact that the logico-deductive process generates specific hypotheses. In the absence of a solid and viable conceptual link the researcher must fall back on inductive methods.

One of the more interesting facts about the public schools of this country is the similarity of all of their features from district to district, county to county, and state to state throughout the nation. This fact is interesting primarily because of the lack of a formal unifying structure and it is an accepted fact that our schools are more the same than they are different, at least in their more obvious features.

To the extent that schools do seem to conform in their more obvious features then their more subtile differences take on greater significanse for we know that some schools are better than others. Other things being equal, the level of financial support can, of course, make an appreciable difference in the quality of education offered in any particular school system. Yet, we know that there is hardly a one-to-one relationship even in this most important area. Halpin and Croft have provided schoolmen, through the Organizational Climate Description Questionnaire, a method of measuring one aspect of the more subtile differences between schools. And, just as we get to know individual persons better we discover that they have "personalities" which set them apart from other persons we also get to know individual schools better and discover that they have "climates" which set them apart from other schools. The basic question becomes, how do we account for variability of school "climates"?

Since schools are made up of people and people have unique personalities it is a safe assumption to conclude that combinations of individual personalities would account for some of the variability. Considerable of the OCDQ research has focused on this premise with respect to both the teachers and administrators of schools. But, just as the environment mediates the personalities of individuals then the environment (organizational structure) may mediate the climate of a school.

Aside from the extensive documentation of the influence of Weber on the organizational structure of schools we have the obvious fact

that schools are neither more nor less than another complex organization in a country which has achieved much of its progress through the ability of its people to systematically organize around goal seeking units. In this sense schools differ largely in client and product and not in the nature of fundamental organizational structure and we find that the most profitable way to study the structure of schools is to consider them as a subsystem of a general organizational system.

In his study Ranyard found a marked similarity in the organizational structure of the schools in his sample. This similarity was attributed to two factors which are critical to this study. The first was that teachers function largely in an "autonomous" world (the classroom) from which they emerge for minimal contact with the larger unit of the school. Through this minimal contact their specific knowledge of the formal structure of the school is limited in terms of their ability to accurately describe it. The second is that elementary schools may very well be structured pretty much the same and that if differences were to be found at all that they would be found in those areas relating to principal-teacher interaction on the decision making level.[16] Quite specifically, the degree of involvement of teachers in the decision making process and the amount of autonomy they have seemed to be the critical factors.

Participation in the decision making process is central to Weber's construct in the sense that the office each member of an organization holds has a clearly defined area of responsibility. As a function of this the organizational member has a prescribed area or range of autonomy wherein, while he is accountable to a superordinate for his actions, he functions largely independent of that superordinate except as accountability inhibits action. In elementary schools the office held by the majority of the staff is that of classroom teacher. By definition this person possesses expertise in matters pertaining to the instructional program. The particular areas of expertise which logically evolve out of this consideration are decisions concerning methods of instruction, choice of materials, and the specific curriculum selected to implement the broad prescriptions set forth in the policies of the school board.

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[16] Ranyard, op cit. pp. 57-60.

It is in these areas where we find the most marked differences between schools. In some the teacher has little or no say over what and how he will teach. In others he is highly involved in the decision making process. In the first he functions as a highly skilled technition at best, and in the second as a true "professional."

In this research it is held that the more the teacher participates in the decision making process in those areas related to classroom instruction the more the particular school conforms to the ideal of the Weberian construct. In the eight subtests of the OCDQ there are two measures of teacher behavior (esprit and intimacy) and two measures of principal behavior (thrust and consideration) in which high scores contribute to an "open climate." Also, there are two measures of teacher behavior (disengagement and hinderence) and two measures of principal behavior (aloofness and production) in which high scores contribute to a "closed climate." Therefore, it is predicted that:

> Elementary schools which show more participation of teachers in the decision making process and a higher level of teacher autonomy will show higher scores on those subtests of the OCDQ which contribute to an open climate.

Research Design

At the time of the original design of the proposal for this research the researcher was located in a large metropolitan area where it would have been a simple task to personally visit a large number of elementary schools to collect data for the study. Between the time of the approval of the grant and the starting time of the study he made a move to a small and physically isolated college (the largest community of any consequence was fifty-nine miles away). This fact presented no difficulties in the collection of the OCDQ data, but neccesitated a significant change in the approach to the structure data.

The basic problem was how to obtain reliable information from the principal of each school on the specific aspects of organizational structure related to this study. It did not seem possible to devise a set of questions on matters relating to teacher autonomy and participation in the decision-making process that were "value free" and would, therefore, assure an accurate and honest response. The method chosen was to get the questions central to this aspect of the study to the

principals in a "blind". That is, in a questionnaire of such length and complexity and with questions related to so many other aspects of school activities as to reduce the probability of the principal being able to perceive a pattern to a minimum. The Center for the Advanced Study of Educational Administration, University of Oregon had just developed two research instruments which seemed especially suited to this approach. After several visits to CASEA to discuss the use of these two questionnairs with the persons responsible for their development this researcher became convinced of their value and that the changes in the format of this study were warranted in the context of being able to use two highly sophisticated questionnaires which had already been subjected to application and validation.

The two instruments used were Research Evaluation for Inservice Training in School Systems Communication, Form B-A (Feb., 1969) and Project Base Line: CASEA, University of Oregon, Eugene, Form A-bdg (Feb., 1968). These two questionnaires contained eighty-eight and eighty-nine items respectively with a large number of items in each questionnaire being of multiple parts and quite complex. It is felt that no useful purpose would be served in reproducing these questionnaires in this report and, therefore, only those questions used in the statistical analysis are included. Also, it should be pointed out that the use of this approach in no way implies that the value connotations of the questions used were eliminated. But, rather that these questions were in such a complex context as to make detection of a pattern quite difficult. The specific questions "lifted" from the completed questionnaires are indicated below. They are grouped according to the thrust of the questions and the catagory titles used are for convenience and were chosen on the basis of the face value of the questions themselves.

I. TEACHER AUTONOMY (I)

School Policies:

1....allow teachers a great deal of freedom in the selection of instructional materials.
2....require teachers to adhere closely to official course outlines and/or curriculum guides.
3....allow teachers a great deal of freedom in determining the amount of time to be devoted to a given subject (math, reading, etc.) on any given day.
4....allow teachers a great deal of freedom in determining when and for how long students may be away from classrooms to use the library or other learning resources.
5....require uniform procedures to be followed in desciplining students.
6....encourage teachers to experiment with new teaching techniques.

In this School:

7....frequent checks are made to determine whether or not teachers are following approved courses of study.
8....teachers feel that they are constantly being watched to see that they follow policies and regulations.
9....teachers are frequently reminded of policies and regulations that must be followed.

The questions and all that follow are numbered for convenience in this report and not as they are numbered in the questionnaires.

The principal responded to the above questions on the scale highly accurate, somewhat accurate, somewhat inaccurate, highly inaccurate. Questions 1, 3, 4, and 6 were scored positively (i.e., a response of 'highly accurate' was taken as an indication of high autonomy) and questions 2, 5, 7, 8, and 9 were scored negatively. On the five-point scale a mean score approaching five was taken as an indication of "high" autonomy and a mean score approaching one was taken as an indication of "low" autonomy.

II. TEACHER PARTICIPATION IN THE DECISION MAKING PROCESS. TEACHER AUTONOMY (II)

This section asks about teacher participation in certain areas of decision-making in your school.
For each item, please select the one statement which best describes the decision-making practice for the activity indicated, then circle the letter beside that statement.

Item 1. CHOICE OF TEACHING METHODS USED IN THE CLASSROOM.

A. Each teacher chooses his own teaching methods without assistance or direction.
B. The final choice of teaching methods is left to the teacher, but there are others whose job includes making recommendations or suggestions.
C. Within certain limits each teacher chooses his own teaching methods.
D. As a member of a group or committee the teacher shares with others the job of deciding the teaching methods to be used.
E. The teacher does not choose his own teaching methods. The methods are laid down for him by others.

Item 2. SCOPE AND SEQUENCE OF SUBJECT-MATTER CONTENT.

This item was marked as above with the substitution of 'scope and sequence of subject-matter content' substituted for 'choice of teaching methods used in the classroom'.

Item 3. CHOICE OF INSTRUCTIONAL MATERIALS TO BE USED BY PUPILS.

As above.

Item 4. PUPIL PROMOTION OR ADVANCEMENT OF PUPIL TO HIGHER LEVEL OF WORK.

As above.

Item 5. SCHEDULING DAILY CLASSROOM ACTIVITIES.

As above.

In the above questions the principal responded as directed in the instructions. If the principal circled response "A" five points were given, if he circled "B" four points were given, and to one point for "E". A mean score approaching five was taken as an indication of "high" teacher autonomy in a given school. Conversly, a mean score approaching one was taken as an indication of "low" teacher autonomy. Examination of this group of questions and the previous group clearly reveals that the focus of both is essentially the same. The reasons for keeping them as separate sets in the analysis are two-fold; one, the first set was scored on a four-point scale and the second on a five point scale: two, the first set specifically refers to school policies and the second implies actual practice.

III. PRINCIPAL SATISFACTION WITH POSITION.

Please indicate your own feeling of satisfaction regarding the following items by circling the letters in the appropriate column below. Indicate only one response for each item.

IN YOUR PRESENT POSITION, HOW SATISFIED ARE YOU WITH:

1....the progress you are making toward the goal you set for yourself in your present position?
2....the adequacy and fairness of school and school district policies and regulations?
3....the extent to which your efforts and achievements are recognized by others?
4....your personal relationships with other administrators and supervisors?

5....the opportunities you have to accept responsibility for your own work or for the work of others?
6....the ability and willingness of other administrators and supervisors to give you help when you need it?
7....the extent to which you are able to see positive results from your efforts?
8....your personal relationships with teachers?
9....your present job when you consider it in light of your career expectations?
10....the availability of pertinent instructional materials and aids in your school district?

These questions were marked on a scale of Highly Satisfied (HS), Fairly Satisfied (FS), Somewhat Dissatisfied (SD), Highly Dissatisfied (HD). For statistical analysis points were alloted on a scale of four points for a response of 'Highly Satisfied' to one point for 'Highly Dissatisfied'. A mean score approaching four was taken as an indication of "high" satisfaction with the position. A mean score approaching one was taken as an indication of "low" satisfaction.

It is obvious that the organizational structure impinges upon the principal as well as the teachers of a school. The nature of the principal's responsibilities requires some degree of interaction with all of the teachers of a school, whereas teachers have some choice of interaction patterns with other teachers. In this context, the principal stands in the most obvious position to have his sense of satisfaction within the organizational structure impinge upon the teachers. In essence, what we have is an indirect indication of the viability of the organizational structure to provide a fulfilling work climate for the teachers. It seems highly unlikely that the organizational structure could supply a satisfying work environment for the principal of a school without also doing the same for the teachers. If we are to accept the standard ethic of the administration and staff of a school being a "team" working toward a common and mutually held set of goals this must follow. Also, the principal's sense of satisfaction, or lack thereof, imposes a "set" upon his behavior which would reasonably be expected to be reflected in how he approaches his dealings with his teachers.

IV. SUPERINTENDENT'S INFLUENCE.

Circle the appropriate initials below that indicate your best estimate of the influence of the superintendent and his cabinet in the following areas of school life.

IN GENERAL, HOW MUCH INFLUENCE DO THE SUPERINTENDENT AND HIS CABINET:

1....have on how your school is run?
2....have on the principal when it comes to his activities and decisions that affect the performance of your school?
3....have on how this school system is run?

These questions were marked on a scale of No Influence (NI), Little Influence (LI), Some Influence (SI), Considerable Influence (CI), A Great

Deal of Influence (GI). For statistical analysis points were allotted on a scale of five points for a response of 'A Great Deal of Influence' to one point for 'No Influence'. A mean score approaching five was taken as an indication of "high" influence from outside the school and a consequent reduction in allowed autonomy for both the principal and teachers. A mean score approaching one would, naturally, be the converse of this.

While the number of questions directed to this point was low it was felt that some indirect indication of the school's ability to function as an autonomous unit could be obtained. It follows that considerable outside influence and institutional autonomy come close to being mutually exclusive events. Therefore, we would have to assume an inverse relationship between scores on these questions and those questions having to do with teacher autonomy and principal autonomy.

V. PRINCIPAL'S INFLUENCE.

Circle the appropriate initials below to indicate your best estimate of the influence of the principal in the following areas of school life.

IN GENERAL, HOW MUCH INFLUENCE:

1....do you feel the principals have on how their school is run in your school district?
2....do the principals of your school district have with teachers in their school when it comes to activities and decisions that affect the performance of their classroom activities?
3....do you feel the principals have in your district on how this school system is run?

These questions were marked on the same scale as in IV, Superintendent's Influence, above. Also, the same point allotment and evaluation was used.

While superintendent's influence, principal's influence, and teachers' influence (see below) may not be mutually exclusive events, it seems reasonable to assume that as any one of the three approached a level of "high" influence the other two would approach a level of "low" influence. Of fundamental interest here which of the three, if any, is more highly correlated with those subtests of the OCDQ which identify the more "open" school climate. These comments apply to 'Teachers' Influence', below.

VI. TEACHERS' INFLUENCE.

Circle the appropriate initials below to indicate your best estimate of the influence of the teachers in the following areas of school life.

IN GENERAL, HOW MUCH INFLUENCE:

1....do you feel the teachers as a group have on how their school is run?
2....do the teachers in your district have on their principal when it comes to his activities and decisions that affect the performance of your school?
3....do you feel the teachers in your district have on how this school system is run?

VII. CONFLICT TOLERATION.

Suppose a teacher (let's call him or her Teacher X) is present when two others get into a hot argument about how the school is run. If teachers you know in your school were in Teacher X's place, what would most of them be likely to do?

1. Would most of the teachers you know here probably listen to both arguers and then side with the one they thought was right?

   (3) Yes, I think most would.
   (2) Maybe about half would.
   (1) No; most would not do this.
   (0) I don't know.

2. Would they try to get the two to quiet down and stop arguing?

   (1) Yes, I think most would.
   (2) Maybe about half would.
   (3) No; most would not do this.
   (0) I don't know.

3. Would they try to help each one in the argument to understand the viewpoint of the other?

   (3) Yes, I think most would.
   (2) Maybe about half would.
   (1) No; most would not do this.
   (0) I don't know.

4. Would they avoid getting involved in the argument of the other two?

   (1) Yes, I think most would avoid it.
   (2) Maybe about half would.
   (3) No; most would not avoid it.
   (0) I don't know.

Suppose Teacher X feels hurt and "put down" by something another teacher has said to him. In Teacher X's place, would most of the teachers you know in your school be likely to:

5....avoid the other teacher?
   (1) Yes, I think most would.
   (2) Maybe about half would.
   (3) No; most would not.
   (0) I don't know.

6....tell the other teacher that they felt hurt and put down?
   (3) Yes, I think most would.
   (2) Maybe about half would.
   (1) No; most would not.
   (0) I don't know.

Suppose Teacher X strongly disagrees with something B says at a staff meeting. In Teacher X's place, would most of the teachers you know in your school:

7....seek out B to discuss the disagreement?
   (3) Yes, I think most would do this.
   (2) Maybe about half would do this.
   (1) No; most would not.
   (0) I don't know.

8....keep it to themselves and say nothing about it?
   (1) Yes, I think most would do this.
   (2) Maybe about half would do this.
   (3) No; most would not.
   (0) I don't know.

9....talk about it with other teachers when B was not present?
   (1) Yes, I think most would do this.
   (2) Maybe about half would do this.
   (3) No; most would not.
   (0) I don't know.

These questions were marked on a three-point scale as indicated in the response spaces for each question. In each case no points was given for a response of "I don't know." A mean score of approaching three was taken as an indication of "high" conflict toleration and a mean score approaching one was taken as an indication of "low" conflict toleration.

10....Suppose Teacher X were present when two others got into a hot argument about how the school is run. Suppose Teacher X tried to help each one to understand the views of the other. How would you feel about the behavior of Teacher X?

(5) I would approve strongly.
(4) I would approve mildly or some.
(3) I wouldn't care one way or the other.
(2) I would disapprove mildly or some.
(1) I would disapprove strongly.

11. Suppose Teacher X were present when two others got into a hot argument about how the school is run. And suppose Teacher X tried to get them to quiet down and stop arguing. How would you feel about the behavior of Teacher X?

(1) I would approve strongly.
(2) I would approve mildly or some.
(3) I wouldn't care one way or the other.
(4) I would disapprove mildly or some.
(5) I would disapprove strongly.

12. Suppose Teacher X disagrees with a procedure that the principal has outlined for all to follow. If Teacher X were to go and talk with the principal about his disagreement, how would you feel about it?

(5) I would approve strongly.
(4) I would approve mildly or some.
(3) I wouldn't care one way or the other.
(2) I would disapprove mildly or some.
(1) I would disapprove strongly.

These questions were marked on a five-point scale as indicated in the response space for each question. A mean score approaching five was taken as an indication of "high" conflice toleration and a mean score approaching one was taken as an indication of "low" conflict toleration. Because all scores were changed to Standard Scores (mean of 50 and standard deviation of 10) for the final statistical analysis these questions were included with questions 1 through 9 in this section, above.

When two or more people are drawn together for a sustained period to pursue common goals or objectives conflict becomes highly probably. In a complex organization such as schools the number of people is significantly greater than two and the goal seeking behavior becomes increasingly more complex. If the probability of conflict is not absolute it is, for all practical purposes, high enough to be treated as an absolute. Organizations are deliberately structured to resolve and accommodate conflict. Within the bureaucratically structured organization the rational-legal basis of the organization is intended to provide a formal and highly effective mechanism

for conflict resolution. The bureaucratic construct provides for staff-line relationships, delegation of authority, a system of general and impersonal rules, and other formal mechanisms deliberately designed to facilitate the decision-making process. Effective decision making is essentially the act of resolving conflict, hence, it can be concluded that a reflection of the ability of an organization to tolerate conflict is also a reflection of the viability of the organizations structure to effectively cope with the decision-making process.

IX. COMMUNICATION.

Suppose Teacher X develops a particularly useful and effective method for teaching something. In Teacher X's place, would most of the teachers you know in your school:

1....describe it briefly at a faculty meeting and offer to meet with others who wanted to hear more about it?

(3) Yes, I think most would do this.
(2) Maybe about half would do this.
(1) No; most would not.
(0) I don't know.

2....say nothing about it unless somebody asked them, then maybe say a little about it?

(1) Yes, I think most would do this.
(2) Maybe about half would do this.
(3) No; most would not.
(0) I don't know.

3....try to get administration backing for a project to get other teachers to use the method?

(3) Yes, I think most would do this.
(2) Maybe about half would do this.
(1) No; most would not.
(0) I don't know.

Suppose Teacher X wants to improve his classroom effectiveness. In Teacher X's place, would most of the teachers you know in your building:

4....ask another teacher to observe his teaching and then have a conference afterward?

(3) Yes, I think most would do this.
(2) Maybe about half would do this.
(1) No; most would not.
(0) I don't know.

5....ask other teachers to let him (Teacher X) observe how the other teachers teach, to get ideas how to improve their own?

(3) Yes, I think most would do this.
(2) Maybe about half would do this.
(1) No; most would not.
(0) I don't know.

6....ask the principal to observe his teaching and then have a conference afterward?

(3) Yes, I think most would do this.
(2) Maybe about half would do this.
(1) No; most would not.
(0) I don't know.

These questions were marked on a three-point scale as indicated in the response spaces for each question. In each case points were given for a response of "I don't know." A mean score approaching three was taken as an indication of "high" communication and a mean score approaching one was taken as an indication of "low" communication.

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7. Suppose Teacher X develops a particularly useful and effective method for teaching something. If X were to describe the method briefly at a faculty meeting and offer to meet further with any who wanted to know more, how would you feel about it?

   (5) I would approve strongly.
   (4) I would approve mildly or some.
   (3) I wouldn't care one way or the other.
   (2) I would disapprove mildly or some.
   (1) I would disapprove strongly.

8. Suppose Teacher X wants to improve his classroom effectiveness. If X asked another teacher to observe his teaching and then have a conference about it afterward, how would you feel toward X?

   (5) I would approve strongly.
   (4) I would approve mildly or some.
   (3) I wouldn't care one way or the other.
   (2) I would disapprove mildly or some.
   (1) I would disapprove strongly.

9. Suppose you are in a committee meeting with Teacher X and the other members begin to describe their personal feelings about what goes on in the school; Teacher X quickly suggests that the committee get back to the topic and keep the discussion objective and impersonal. How would you feel toward X?

   (1) I would approve strongly.
   (2) I would approve mildly or some.
   (3) I wouldn't care one way or the other.
   (4) I would disapprove mildly or some.
   (5) I would disapprove strongly.

10. Suppose you are in a committee meeting with Teacher X and the other members begin to describe their personal feelings about what goes on in the school: Teacher X listens to them and tells them his own feelings. How would you feel toward X?

    (5) I would approve strongly.
    (4) I would approve mildly or some.
    (3) I wouldn't care one way or the other.
    (2) I would disapprove mildly or some.
    (1) I would disapprove strongly.

These questions were marked on a five-point scale as indicated in the response space for each question. A mean score approaching five was taken as an indication of "high" communication and a mean score approaching one was taken as an indication of "low" communication. Because all scores were changed to Standard Score (mean of 50 and standard deviation of 10) for the final statistical analysis these questions were included with questions 1 through 6 in this section, above.

Free and open communication is essential to the effective functioning of a complex organization. In authoritarian organizations the basic thrust of this communication is one way; downward, and need assure only that orders are clearly understood with respect to intent and execution. In professional or para-professional organizations (such as schools) it is essential that the communication be two-way. Not only do directives and policies need to be clearly communicated from superordinates to subordinates but provisions must be made for feed-back. Directives and policies are carried out by persons with a considerable amount of formal training and who bring a high level of expertise to the offices they hold. Their knowledge of the variables influencing the decision making processes in their organization is high and their commitment to the goals of the organization is, to a considerable degree, a function of their sense of ability to influence the decision-making processes.

The effective bureaucratic organization provides for free and open communication. This concept is central to the intent of the Weberarin construct and is reflected in the deliberate structuring of the hierarchy of offices and in staff-line relationships. To the extent that examination of an organization reveals effective channels of communication we have an indication that organizational structure is facilitating the goal seeking behavior of the organization.

SAMPLING METHOD

The potential sample for this research was all non-urban elementary schools in Washington State with student enrollment of 300 or more students. The figure 300 was chosen to reasonably assure a full time teaching staff of ten or more teachers (a thirty to one student to teacher ratio was assumed for this figure). Urban schools were excluded from the sample because the Organizational Climate Description Questionnaire was validated on non-urban schools.

The superintendents of all school districts in which there was at least one elementary school which met the above criteria were contacted. The purpose of the research was explained and it was stressed that the participation of the principal and the staff should be voluntary. It was stated that the basic reason for this was that the data would be collected by mail and that it was felt a more reliable response would be obtained if the schools participated on a voluntary basis. It was also pointed out that the participa-

pation of the district elementary schools did not have to be on an all or none basis. Permission was requested to contact the principals of the eligible elementary schools.

In those districts where the superintendent's permission was obtained the principals of the elementary schools were contacted by letter. The letter explained that the superintendent had been contacted and that his permission had been obtained to make the contact. The general purpose of the research was explained and it was stressed that his and the staffs' participation should be voluntary. To affect this it was suggested that he bring the request up at a faculty meeting to obtain their agreement to participate. It was explained that the teaching staff would respond only to the OCDQ and that to assure that their responses would not be available to the principal for his examination that they should elect a staff member to receive the questionnaires, distribute them, collect them, and return them to the researcher in a sealed envelope. The principal was informed that his questionnaires would be sent to him after the return of the Staffs' questionnaires and response forms.

When the principal of an elementary school wrote indicating his and his staffs' willingness to participate in the research the designated staff member of the school was sent the Organizational Climate Description Questionnaires, the response sheets, and instructions for the administration of the questionnaires. The instructions indicated that the envelope containing the questionnaires was to be opened in the presence of the staff, that the responding would take place in the group situation, and that the response sheets would be returned and sealed in the return envelope in their presence. It was also stressed that each respondent would complete his questionnaire without discussion with other respondents.

When the OCDQ response sheets were returned from a school the principal was sent the two CASEA questionnaires (Form B-A and Form A-bdg) with instructions to try to complete the questionnaires at a time when he could give them his full attention and without consultation with another person. He was asked to return the questionnaires as soon as conveniently possible.

In each phase of the data collection assurance was given that schools or persons involved would not be identified by name and that the original data would be seen only by the research staff. Also, assurance was given that specific data would not be released without written permission from the principal of the school involved.

While the above processes seem relatively simple it should be pointed out that the time involved covered a period of approximately nine months. The reason for this being that no principals were contacted until all of the superintendents had responded either positively or negatively, no questionnaires were sent out until all of the principals contacted had responded, and so forth. This procedure was used primarily so that two or more schools where the principals or teachers might be in communication would not have an opportunity to compare "notes" on the research. In essence, then, all of the schools involved in the research were engaged in the same phase of the research at approximately the same time.

Because of the methods which had to be used to collect the data for this research there was considerable attrition in the usable sample. Of a potential sample of 179 schools, 137 usable responses were obtained. The criteria for inclusion in the study was simply that all three questionnaires be returned in completed form. Therefore, one or more questionnaires did not meet this criteria from 42 schools.

DATA ANALYSIS

The OCDQ data was analyzed by the three-factor varimax rotational solution developed by Halpin and Croft. The original program in Fortran II was obtained from Croft and was rewritten in SPS so as to adapt it for use on the IBM 1620 computer. The SPS program is available from the researcher on request but is not included in this report because of its considerable length. The original Fortran program is much shorter but can be used on only the most advanced computers because of the considerable strain it puts upon the computer memory function. The length of the SPS program is a function of the fact that it contains a large number of sub-steps specifically designed to discard data from memory once it has served its function, but it does have the obvious advantage of being functional on a computer of limited memory capacity.

Figure I. contains the Organizational Climate data for the 137 schools. The first column contains the code number for each school. Columns two through nine contain the doubly standardized scores (mean 50 and standard deviation 10) on each of the eight sub-tests for each school. Columns ten through sixteen contain the "climate profile" scores for each school. The "climate profile" scores are obtained by the three-factor varimax rotational analysis and are a function of the prototypic profiles

Figure I. Subtest and climate scores for 137 elementary schools in Washington State.

School Number	DIS	HIN	ESP	INT	ALO	PRD	THR	CON	OPN	AUT	CNT	FAM	PAT	CLS
001	37	53	39	48	59	59	42	60	100	87	59	104	83	61
002	49	57	58	48	46	38	36	63	69	88	91	69	91	90
003	42	43	53	57	45	37	55	66	44	47	97	34	84	110
004	48	46	43	55	36	43	64	61	49	83	113	54	60	96
005	57	60	41	43	64	46	48	38	115	96	74	98	81	54
006	36	57	58	57	57	35	48	50	73	39	61	74	111	88
007	69	52	42	54	44	50	39	48	99	105	101	68	51	33
008	57	43	40	55	41	40	60	61	52	81	124	33	58	81
009	58	57	51	59	47	44	30	49	95	83	93	62	83	58
010	41	42	54	54	43	43	51	69	41	54	89	44	76	105
011	60	59	44	59	50	44	32	48	107	90	97	69	78	44
012	63	60	49	50	49	46	31	48	98	101	88	75	71	51
013	54	52	44	57	34	39	61	55	60	82	113	47	59	84
014	55	57	31	56	41	46	56	55	74	96	103	53	63	68
015	47	53	43	52	70	49	39	43	103	80	76	103	92	44
016	63	50	55	57	42	43	33	53	72	82	108	47	63	64
017	50	37	63	58	41	39	51	57	36	54	109	34	74	108
018	50	50	58	63	50	30	45	51	71	52	95	57	94	83
019	51	51	55	50	41	32	64	53	39	74	96	56	75	102
020	57	53	48	59	36	36	47	59	79	80	111	29	60	80
021	45	44	56	69	44	42	43	54	51	51	99	54	84	95
022	53	56	54	54	58	36	33	51	91	63	86	69	100	66
023	54	47	50	45	42	35	59	65	53	84	103	40	61	105
024	57	43	46	36	63	41	58	53	71	68	90	65	69	87
025	46	55	56	51	63	37	36	52	79	56	81	81	105	77
026	53	63	35	48	55	40	44	59	96	94	92	74	83	58
027	61	64	41	48	52	49	36	44	115	112	81	93	71	32
028	41	50	56	60	52	34	43	60	69	47	87	57	102	89
029	56	61	47	57	30	49	46	51	91	97	96	64	60	68
030	59	66	52	52	39	44	39	45	88	102	91	70	72	58
031	60	55	45	46	37	42	46	65	80	109	101	54	44	75

School Number	DIS	HIN	ESP	INT	ALO	PRD	THR	CON	OPN	AUT	CNT	FAM	PAT	CLS
032	44	62	57	56	33	44	46	54	58	78	87	71	79	96
033	65	56	45	56	44	45	34	51	94	98	105	58	57	50
034	57	52	52	58	57	38	32	50	95	59	95	59	93	57
035	61	58	43	44	57	54	34	45	122	110	68	100	65	33
036	46	46	62	50	45	39	43	67	44	72	100	57	83	99
037	56	44	62	57	38	45	37	56	54	84	115	50	63	82
038	44	43	48	44	62	66	52	39	89	70	47	99	80	82
039	45	57	53	45	58	62	36	39	105	91	36	121	98	66
040	57	47	46	41	65	41	40	59	94	82	94	66	71	69
041	66	53	40	55	46	37	45	53	89	87	109	44	56	49
042	43	58	49	60	55	31	55	46	79	47	70	70	107	81
043	57	53	46	51	66	40	37	46	103	76	91	77	86	45
044	67	47	36	51	48	46	44	59	87	101	112	55	48	49
045	47	48	49	43	47	36	60	67	54	79	92	53	75	108
046	62	43	39	45	55	63	39	50	107	100	75	85	52	37
047	61	49	44	49	64	50	35	45	110	91	88	88	67	34
048	51	50	44	66	54	57	36	40	115	85	80	95	86	43
049	60	51	40	54	65	46	39	42	112	85	95	82	83	26
050	57	64	40	47	46	43	39	61	92	111	103	67	70	62
051	57	59	42	52	51	30	50	56	87	86	94	49	68	65
052	51	60	50	54	47	33	41	61	84	85	98	51	90	78
053	46	40	41	63	65	48	45	49	92	45	97	78	91	66
054	56	57	32	46	45	45	57	60	77	108	96	64	61	74
055	67	33	50	45	51	44	54	52	70	75	95	51	49	80
056	66	43	43	48	61	38	50	47	85	58	95	55	56	60
057	61	48	40	58	62	36	46	46	104	60	103	54	79	44
058	56	35	52	54	37	47	55	61	57	79	112	39	54	94
059	62	40	51	63	46	48	35	50	86	69	109	49	66	61
060	40	43	52	46	50	52	43	71	67	74	72	76	74	89
061	60	40	47	53	49	36	47	65	76	72	114	25	63	75
062	57	48	40	57	61	38	39	58	98	66	114	51	80	53
063	52	47	53	63	33	42	49	59	63	66	106	41	63	97
064	58	56	39	58	52	33	44	56	98	80	103	48	79	53
065	68	43	46	49	52	41	41	58	79	82	109	45	53	58

School Number	DIS	HIN	ESP	INT	ALO	PRD	THR	CON	OPN	AUT	CNT	FAM	PAT	CLS
066	63	55	50	54	49	51	31	43	106	102	83	76	70	36
067	56	42	38	43	50	59	43	65	97	109	87	73	54	60
068	49	44	39	40	54	54	47	69	92	96	76	82	61	68
069	59	60	43	42	62	44	38	49	110	91	82	89	78	52
070	43	43	57	57	36	42	59	59	26	57	102	47	76	116
071	57	64	43	56	53	46	35	43	114	97	88	84	88	37
072	47	45	58	52	37	39	54	65	39	65	103	47	68	110
073	39	52	48	46	69	42	45	55	76	60	69	85	87	82
074	53	51	36	36	51	52	52	65	97	107	77	81	63	66
075	60	60	38	48	55	56	36	44	122	114	71	100	72	22
076	51	49	35	52	65	40	46	59	89	69	102	66	84	62
077	52	51	39	42	69	44	54	45	94	78	74	91	82	62
078	61	52	38	51	63	52	39	41	119	98	87	95	75	18
079	40	39	68	57	48	45	47	52	44	46	86	65	91	98
080	59	52	38	52	64	49	36	47	114	91	92	89	78	26
081	64	55	38	49	52	56	36	47	116	114	78	94	59	23
082	35	47	56	52	49	39	55	65	47	50	81	57	89	107
083	56	48	38	46	58	64	37	50	113	99	73	98	66	41
084	45	30	50	54	55	47	53	62	66	53	89	56	84	90
085	60	45	50	48	58	30	50	57	75	64	94	37	61	77
086	40	42	45	52	41	51	57	68	49	75	93	61	61	97
087	62	57	43	54	49	55	32	44	116	112	81	86	64	26
088	51	56	52	62	55	44	30	46	97	65	78	82	103	59
089	35	42	51	54	40	60	52	62	58	71	69	60	64	101
090	51	42	56	58	33	43	52	62	49	63	107	36	64	104
091	56	44	53	60	41	32	51	59	59	59	110	18	62	95
092	41	49	33	55	63	47	51	58	82	59	84	77	84	69
093	65	55	46	56	52	41	35	46	103	84	95	65	74	40
094	42	39	44	56	44	53	51	68	65	70	92	53	62	89
095	53	33	43	51	45	58	50	64	80	95	95	58	51	80
096	43	43	43	61	39	46	61	61	44	67	109	53	67	101
097	65	47	46	62	40	38	46	52	77	69	117	34	45	70
098	59	55	34	49	62	50	39	47	115	96	85	94	76	30
099	48	63	42	56	53	55	32	48	112	94	76	99	88	46

School Number	DIS	HIN	ESP	INT	ALO	PRD	THR	CON	OPN	AUT	CNT	FAM	PAT	CLS
100	45	59	52	59	62	44	36	41	98	61	75	93	116	66
101	60	54	32	54	42	61	47	47	104	112	80	75	56	38
102	51	48	37	65	39	44	54	59	71	78	115	50	62	80
103	63	58	41	51	37	44	44	59	86	112	108	57	45	57
104	39	68	40	49	49	45	57	50	70	78	71	93	88	82
105	57	58	40	53	59	54	36	39	125	101	80	100	83	26
106	51	49	41	61	65	50	39	40	115	73	92	94	93	43
107	30	48	50	64	51	48	54	52	68	46	73	71	88	91
108	51	57	38	51	42	42	49	68	74	99	99	61	69	74
109	62	55	33	47	55	55	39	52	113	110	81	91	56	25
110	66	60	42	48	51	41	38	50	99	99	94	75	62	47
111	53	47	60	63	48	31	46	49	69	52	99	53	90	84
112	62	55	38	51	53	41	38	58	98	97	102	62	69	37
113	59	62	41	55	55	42	35	47	108	89	93	76	87	37
114	68	49	35	47	51	41	53	53	80	87	100	59	47	57
115	51	46	39	45	70	53	43	48	103	84	80	97	66	49
116	52	55	34	44	43	66	54	49	92	111	64	90	59	67
117	33	37	54	54	49	56	57	56	54	59	69	73	80	98
118	43	36	58	54	49	41	65	52	32	48	94	64	95	106
119	49	64	43	48	64	40	42	46	101	77	81	95	96	62
120	42	61	41	54	59	35	58	47	78	57	77	82	104	74
121	43	42	54	67	51	52	35	53	71	56	86	74	87	78
122	66	49	44	49	60	47	36	46	106	87	92	84	62	38
123	39	37	51	53	57	41	56	63	54	39	85	57	94	101
124	53	62	39	63	54	41	45	40	109	77	90	81	99	50
125	40	47	54	57	42	38	55	65	45	48	91	41	83	111
126	47	70	42	52	51	52	43	41	105	101	74	103	88	48
127	66	58	42	49	52	44	35	51	100	101	93	78	64	42
128	53	49	45	60	66	38	44	43	102	54	97	68	93	57
129	63	61	41	48	40	39	50	56	78	100	101	50	43	69
130	51	56	49	60	53	42	30	55	89	74	92	65	91	67
131	54	38	36	47	49	49	59	64	69	91	107	64	64	78
132	46	48	56	67	52	40	37	52	72	48	93	68	98	80
133	47	67	44	39	44	48	46	62	86	110	75	82	70	90

School Number	DIS	HIN	ESP	INT	ALO	PRD	THR	CON	OPN	AUT	CNT	FAM	PAT	CLS
134	50	64	56	58	40	34	47	47	74	71	89	59	89	87
135	34	37	54	62	56	52	50	52	72	32	65	75	89	88
136	42	37	59	58	40	45	57	60	30	55	101	49	80	116
137	52	63	50	53	60	40	37	42	103	73	82	85	107	58

established for each of the six climate catagories. Since the "climate" scores are not used in the analysis in this study they will be considered only in context with the sub-tests which 'load' on each of the climate catagories.

The organizational Climate Description Questionnaire is presented in the appendix of this report. It is presented with the 64 questions grouped by sub-test catagory rather than in the random order of the final form. Reference to this appendix item will indicate, through the thrust of the questions in each section, why the particular title was chosen for each sub-test. A detailed discussion of the OCDQ will not be presented with this report as it will be assumed that the reader is already familiar with the work of Halpin and Croft or that he can go any one of several references for discussions which could not be improved upon.

The titles in Figure I refer to the sub-tests and climate catagories as follows; DIS=disengagement, HIN=hindrance, ESP=esprit, INT=intimacy, ALO-aloofness, PRD-production emphasis, THR=thrust, CON=consideration for the sub-tests, and OPN=open, AUT=autonomous, CNT=controlled, FAM=familiar, PAT=paternal, CLO=closed for the climate catagories. Since the sub-test scores are standardized a score on any one of the sub-tests of 50 would be at the mean, a score of 60 on any one of the sub-tests would be one standard deviation above the mean , and so-forth. DIS, HIN, ESP, INT are teacher variables and ALO, PRD, THR, and CON are principal variables. High scores on ESP, INT, THR, and CON "load" on the prototypic profiles for an open climate. High scores on DIS, HIN, ALO, and PRD "load" on the prototypic profiles for a closed climate.

The sub-test scores on the OCDQ are clear and straightforward measures of teacher and principal behavior in the school situation. Staying with them in the data analysis of this study avoids the complications inherent in the fact that there is not a linear relationship involved in moving from sub-test scores to climate catagories. Also, there is considerable acceptance among research persons of the value and validity of the sub-test scores while the climate catagories have come under considerable criticism. Last, the organizational structure scores of this study were arrived at by the same statistical procedure as used on the sub-test scores of the OCDQ. This fact alone directs that the statistical analysis between OCDQ and OCDQ data be held to this level.

Figure II. Organizational structure scores for 137 elementary schools in Washington state.

	AUT1	AUT2	PSAT	SINF	PINF	TINF	PCOM	CONT	COHM
001	59	61	39	52	38	46	54	45	49
002	59	40	50	43	65	46	45	48	48
003	57	43	47	47	52	59	27	53	50
004	54	43	72	43	72	33	54	60	53
005	46	36	28	57	32	46	63	48	42
006	51	58	50	52	45	46	54	55	50
007	51	50	47	47	45	33	45	57	48
008	51	61	50	57	65	72	54	48	55
009	29	61	50	67	65	59	45	60	54
010	62	6k	67	62	52	59	63	50	59
011	62	40	61	53	59	66	36	45	52
012	57	36	50	62	59	53	54	53	53
013	62	58	50	43	45	46	54	57	53
014	65	61	53	43	45	53	36	50	51
015	54	61	42	47	65	66	54	48	53
016	57	50	53	33	59	59	27	48	49
017	65	36	50	38	52	39	54	57	50
018	54	54	50	33	59	53	36	60	51
019	65	47	58	67	45	53	72	53	58
020	48	50	64	52	52	39	63	57	52
021	48	40	50	43	45	59	36	45	48
022	38	47	33	47	45	53	54	45	44
023	46	58	44	43	45	59	72	74	55
024	51	54	50	52	59	59	45	53	51
025	54	65	47	47	52	46	45	53	52
026	40	33	44	43	52	59	54	50	47
027	46	65	50	62	45	66	63	38	54
028	35	43	55	67	59	46	36	57	50
029	57	47	44	43	45	46	54	55	52
030	46	25	55	52	52	39	45	69	50
031	57	40	47	43	38	39	54	55	46
032	54	43	42	52	45	46	45	45	46
033	59	43	50	43	72	39	36	36	51
034	46	50	58	38	59	59	45	57	51
035	57	61	53	52	32	39	63	53	51
036	38	54	53	47	38	39	45	45	46
037	57	47	61	57	52	59	63	57	55
038	40	40	50	52	72	72	45	43	52
039	35	47	50	67	52	59	45	48	47
040	57	47	50	47	45	46	63	55	50
041	46	54	55	57	52	46	54	53	50
042	54	40	50	67	45	46	45	60	52
043	68	68	53	52	52	53	36	50	55
044	43	29	50	43	38	46	54	48	44

	AUT1	AUT2	PSAT	SINF	PINF	TINF	PCOM	CONT	COMM
045	51	54	61	43	65	39	45	67	53
046	38	54	64	52	52	59	54	50	54
047	46	47	53	47	45	46	45	50	48
048	54	61	36	52	52	59	54	43	53
049	27	57	30	67	52	39	72	55	49
050	65	40	64	33	72	59	45	57	55
051	35	47	50	52	52	39	36	50	45
052	38	50	55	47	45	39	36	53	47
053	70	47	28	47	52	59	54	55	50
054	46	29	50	52	52	53	45	57	50
055	40	47	42	67	65	59	45	62	53
056	38	50	30	47	52	26	45	55	42
057	62	36	42	62	45	39	45	55	48
058	57	58	55	52	45	59	63	55	55
059	65	43	64	43	38	46	54	50	51
060	46	50	67	47	59	39	45	43	50
061	54	47	61	47	52	53	36	43	48
062	57	58	53	57	38	53	54	48	51
063	40	54	25	62	32	33	54	43	44
064	57	40	36	62	32	46	54	53	48
065	57	50	55	43	45	46	45	45	47
066	57	68	53	43	45	33	54	50	49
067	46	61	42	57	59	46	45	62	53
068	43	65	53	52	52	59	54	64	56
069	40	40	44	52	32	46	45	54	46
070	51	50	36	47	38	46	45	53	46
071	46	25	53	57	52	39	36	60	45
072	51	32	42	23	45	53	45	48	42
073	35	61	64	52	52	59	36	69	53
074	48	29	58	57	59	59	54	52	53
075	65	47	61	47	52	39	45	57	50
076	38	47	33	52	52	53	63	53	50
077	38	47	47	52	65	39	36	55	48
078	38	48	47	67	72	53	63	53	56
079	65	58	44	43	45	39	54	53	50
080	38	58	47	47	38	46	54	36	46
081	40	76	28	62	32	39	45	19	44
082	68	54	47	62	59	66	63	41	56
083	57	36	39	38	32	33	54	53	41
084	57	43	61	52	39	33	36	43	45
085	35	54	61	57	45	53	54	21	48
086	52	40	53	52	45	53	45	50	47
087	27	43	50	57	59	65	45	62	52
088	35	50	58	67	52	59	36	10	44
089	51	36	44	52	52	59	54	45	49
090	57	68	36	33	32	59	45	57	49

	AUT1	AUT2	PSAT	SINF	PINF	TINF	PCOM	COMT	COMM
091	70	50	53	33	59	59	63	55	56
092	68	50	39	62	52	46	45	29	49
093	46	65	53	62	59	46	45	41	52
094	38	50	72	52	59	59	63	62	55
095	40	65	55	43	59	59	63	43	54
096	51	43	55	52	45	59	54	36	52
097	65	50	47	52	52	53	45	29	51
098	40	65	36	38	45	46	54	45	46
099	65	47	50	43	59	59	72	41	52
100	57	58	39	52	32	39	54	55	48
101	46	54	53	62	65	59	54	53	54
102	57	43	50	67	52	59	45	60	53
103	54	47	47	43	59	53	45	50	49
104	40	65	58	62	52	66	63	62	57
105	57	47	44	57	38	53	54	36	49
106	43	47	55	47	52	46	63	60	52
107	48	43	64	47	59	66	54	53	55
108	48	68	30	43	32	33	45	53	45
109	40	46	33	43	52	39	45	50	46
110	68	68	69	62	52	66	54	48	60
111	59	47	42	33	38	46	63	64	49
112	60	50	50	42	59	39	63	53	53
113	29	47	67	42	52	46	36	36	46
114	48	43	50	42	59	53	45	45	48
115	43	61	55	28	52	59	45	50	51
116	46	61	47	62	65	59	54	60	54
117	54	50	58	52	52	53	72	36	52
118	54	47	69	42	45	26	72	36	50
119	43	54	47	52	38	33	45	19	42
120	40	47	50	43	45	53	36	41	44
121	57	54	61	38	59	53	45	43	52
122	46	47	53	38	52	40	54	60	47
123	38	61	58	43	59	66	36	45	50
124	51	50	42	62	59	53	36	57	51
125	51	54	44	28	32	40	72	43	48
126	57	47	28	43	38	53	36	45	45
127	57	61	64	47	52	62	45	33	55
128	46	54	50	47	45	53	45	48	48
129	35	61	55	62	52	53	54	50	52
130	51	50	50	67	52	59	45	45	50
131	54	54	53	43	52	40	45	55	48
132	48	43	50	57	59	59	36	53	52
133	43	43	44	67	25	26	36	33	41
134	46	54	58	52	45	40	63	53	50
135	40	40	33	28	32	46	63	57	43

	AUT1	AUT2	PSAT	SINF	PINF	TINF	PCOM	CONT	COMM
136	59	29	72	52	52	59	45	38	50
137	65	43	53	33	52	53	54	55	51

Figure II contains the organizational structure scores for the 137 schools. These are standard scores with a mean of 50 and a standard deviation of 10. The fact that there is variation both between and within schools on the sub-test scores of the structure questionnaires is clearly revealed by visual examination of the score display of Figure II. The size of the sample in combination with above observed variation precludes the statistical necessity of determining significant differences between means as valid measures of differences between schools.

The column titles in Figure II refer to the sub-tests of the structure questionnaire as follows: AUT1=autonomy 1, AUT2=autonomy 2, PSAT=principal satisfaction with job, SINF=superintendent influence on decision making, PINF-teacher influence on decision making, TINF=teacher influence on decision making, PCOM=principal commitment to job, CONT=conflict toleration, and COMM=organizational provisions for communication.

The first stage of statistical analysis is presented in Figure III. This is a Pearson r correlation matrix of OCDQ sub-test scores with OSDQ sub-test scores. Correlations equal to or greater than the 10% level of confidence are considered in this table. The following coefficients of correlation are required at the indicated levels of confidence: r of .102 at the 10% level, r of .167 at the 5% level, and r of .219 at the 1% level. The correlations at the 10% level are included only for consideration in the multiple correlation analysis to follow. Discussion of individual correlations is limited to those that fall at or above the 5% and 1% levels.

Figure III. Correlation matrix for OCDQ sub-tests with OSDQ sub-tests.

	OSDQ Sub-tests								
	AUT1	AUT2	PSAT	SINF	PINF	TINF	PCOM	CONT	COMM
DIS	-.050	.038	-.043	.048	.059	-.138	-.064	.019	.029
HIN	-.096	-.023	-.137	.188	-.075	-.084	-.139	-.032	-.057
ESP	.159	-.067	.161	-.167	-.078	-.016	.025	.024	.006
INT	.217	-.062	-.008	-.057	-.033	.091	-.049	-.061	.105
ALO	-.223	.116	-.160	.072	.016	.005	-.060	.102	-.214
PRD	-.102	.055	-.067	.074	.081	.131	.118	-.079	-.064
THR	.096	-.084	.073	-.050	-.016	-.013	.172	.138	.146
CON	.105	-.022	.205	-.160	-.003	.008	.017	.072	.156

- -

With reference to Figure III the following correlations meet the indicated levels of confidence for an N of 137: 1% at .219, 5% at .167, and 10% at .102. The 10% level correlations are noted in Figure III

because they are included in the miltiple-regression analysis to follow later in this report.

The OCDQ sub-tests which "load" positively for an open climate are esprite and intimacy on the teacher dimension, and consideration and thrust on the principal dimension. Examination of Figure III reveals the following correlations at the indicated confidence levels to support the thrust of the general hypothesis of this study: Esprit with autonomy 1 is .159 at slightly less than 5%, esprit with principal satisfaction is .161 at slightly less than 5%, and esprit with superintendent influence is -.167 at slightly less than 5%. Intimacy with autonomy 1 is .217 at slightly less than 1%. Thrust with principal commitment is .172 at slightly greater than 5%. Consideration with principal satisfaction is .205 at slightly less than 1%.

The OCDQ sub-tests which "load" negatively for an open climate (or positively for a closed climate) are disengagement and hindrance on the teacher dimension, and aloofness and production emphasis on the principal dimension. Examination of Figure III reveals the following correlations at the indicated confidence levels to support the thrust of the general hypothesis of this study: Hindrance with superintendent influence is .188 at greater than 5%. Aloofness with autonomy 1 is -.223 at greater than 1%, aloofness with principal satisfaction is -.160 at slightly less than 5%, and aloofness with communication is -.214 at slightly less than 1%.

It is fully recognized that while a number of correlations were obtained at acceptable confidence levels the amount of variance accounted for by the best of them (aloofness with autonomy 1 at -.223) is low enough to place the value of the findings in serious question. But, in keeping with the idea that climate may very well be to organizations as personality is to individuals we may also conclude that it may be at least as complex. And further, then, that variance accounted for, no matter how small, may be of some practical value. To pursue this premise further and in an effort to account for more of the variance in the sub-tests of the OCDQ the following multiple-regressions were obtained. In each one reference to Figure III will reveal the rational for the choice of sub-tests of the OSDQ as independent variables with the indicated sub-tests of the OCDQ as dependent variables. The only sub-test scores from the OSDQ called up for co-variance analysis with sub-tests from the OCDQ as dependent variables were those with correlations significant at or greater than the 10% level.

Figure IV. Multiple regression analysis with Hindrance as dependent variable and Autonomy 1, Principal Satisfaction, Principal Commitment as independent variables.

AUT1	PSAT	PCOM	HIN
Beta values			
-.07180	-.13508	-.13555	
B-values			
-.06045	-.11357	-.11281	

Constant A for the regression formula in raw score form = 65.2240

R = .21054 R-Sq = .04433

Standard error of estimate = 8.2029

F-Test value for hypothesis of R-Sq equal to 0 = 2.05647

T-Test values for betas		
-.03974	-1.58735	-1.58994

Degrees of freedom = 133

In Figure IV it can be seen that no significant increase in explained variance has been accounted for by multiple regression analysis over the individual correlation analysis. Figure V is the above analysis with Autonomy 1 eliminated.

Figure V. Multiple regression analysis with Hindrance as dependent variable and Principal Satisfaction, Principal Commitment as independent variables.

PSAT	PCOM	HIN
Beta values		
-.14109	-.14296	
B-values		
-.11862	-.11897	

Constant A for the regression formula in raw score form = 62.7565

R = .19815 R-Sq = .03926

Standard error of estimate = 8.2246

F-Test value for hypothesis of R-sQ equal to 0 = 2.73816

T-Test values for betas	
-1.66571	-1.68778

Degrees of freedom = 134.

No significant increase in explained variance is noted from examination of Figure V.

Figure VI. Multiple regression analysis with Esprit as dependent variable and Autonomy 1, Principal Satisfaction as independent variables.

AUT1	PSAT	ESP
Beta values		
.14653	.14958	
B-values		
.11302	.11520	

Constant A for the regression formula in raw score form = 34.6788

R = .21770 R-Sq = .04739

Standard error of estimate = 7.5022

F-Test value for hypothesis of R-Sq equal to 0 = 3.33352

T-Test values for Betas
1.73220 1.76832

Degrees of freedom = 134.

In Figure VI it can be seen that no significant increase in explained variance has been accounted for by multiple regression analysis over the individual correlation analysis.

Figure VII. Multiple regression analysis with Intimacy as dependent variable and Autonomy 1, Teacher Influence, Communication as independent variables.

AUT1	TINF	COMM	INT
Beta values			
.20533	.08360	.07451	
B-values			
.13505	.05443	.04876	

Constant A for the regression formula in raw score form = 41.0471

R = .24511 R-Sq = .06008

Standard error of estimate = 6.3541

F-Test value for hypothesis of R-Sq equal to 0 = 2.83383

T-Test values for Betas
2.41926 .99380 .87755

Degrees of freedom - 133.

In Figure VII it can be seen that there is a slight increase in explained variance when Intimacy is taken as a function of Autonomy 1, Teacher Influence, and Communication over taking Intimacy as a function of any one of these variables independently. It is, of course, admitted that a 2% increase does not constitute an improvement of considerable impact. Figure VIII is the above analysis with Communication eliminated.

Figure VIII. Multiple regression analysis with Intimacy as dependent variable and Autonomy 1, Teacher Influence as independent variables.

AUT1	TINF	INT
Beta values		
.21547	.08595	
B-values		
.14171	.05596	

Constant A for the regression formula in raw score form = 43.0957

R = .23374 R-Sq = .05463

Standard error of estimate = 6.3725

F-Test value for hypothesis of R-Sq equal to 0 = 3.87234

T-Test values for betas	
2.56478	1.02310

Degrees of freedom = 134.

In Figure VIII it can be seen that some loss in explained variance has been realized by the elimination of Communication from consideration in the multiple regression analysis. Since this loss is negligable and because the results displayed in Figure VII did not make a significant contribution over the individual correlation analysis no significant conclusions can be drawn.

Figure IX. Multiple regression analysis with Aloofness as dependent variable and Autonomy 1, Superintendent Influence, Conflict Toleration, Communication as independent variables.

AUT1	SINF	CONT	COMM	ALO
Beta values				
-.18919	-.12249	-.08555	-.16618	
B-values				
-.17657	-.11415	-.08047	-.15434	

Constant A for the regression formula in raw score form = 77.0859

R = .32545 R-Sq = .10592

Standard error of estimate = 8.7940

F-Test value for hypothesis of R-Sq equal to 0 = 3.90958

T-Test values for betas			
-2.27252	-1.47291	-1.03657	-1.98029

Degrees of freedom - 132.

In Figure VIII it can be seen that some loss in explained variance has been realized by the elimination of Communication from consideration in the multiple regression analysis. Since this loss is negligable and because the results displayed in Figure VII did not make a significant contribution over the individual correlation analysis no significant conclusions can be drawn.

Figure IX. Multiple regression analysis with Aloofness as dependent variable and Autonomy 1, Superintendent Influence, Conflict Toleration, Communication as independent variables.

AUT1	SINF	CONT	COMM	ALO
Beta values				
-.18919	-.12249	-.08555	-.16618	
B-values				
-.17657	-.11415	-.08047	-.15434	

Constant A for the regression formula in raw score form = 77.0859

R = .32545 R-Sq = .10592

Standard error of estimate = 8.7940

F-Test value for hypothesis of R-Sq equal to 0 = 3.90958

T-Test values for betas			
-2.27252	-1.47291	-1.03657	-1.98029

Degrees of freedom - 132.

In Figure IX it can be seen with an R of .33 and an R-Sq of .11 that an appreciable increase in explained variance has been obtained over individual correlation analysis. But, once again, an explained variance of 11% indicates, at best, nothing more than a possible trend and surely not conclusive evidence that variability in organizational climate can be accounted for in terms of variation in the sub-tests scores in organizational structure identified in Figure IX. Figure X is the above analysis with Conflict Toleration eliminated.

Figure X. Multiple regression analysis with Aloofness as dependent variable and Autonomy 1, Superintendent Influence, Communication as independent variables.

AUT1	SINF	COMM	ALO
Beta values			
-.18904	-.12224	-.17274	
B-values			
-.17642	-.11392	-.16044	

Constant A for the regression formula in raw score form = 73.3690

R = .31407 R-Sq = .09864

Standard error of estimate = 8.8297

F-Test value for hypothesis of R-Sq equal to 0 = 4.85189

T-Test values for betas

-2.27000	-1.46951	-2.06381

Degrees of freedom - 133.

In Figure X it can be seen that elimination of Conflict Toleration from the multiple-regression analysis gives a 1% loss in explained variance in Aloofness over that obtained in Figure IX. No conclusions can be drawn from this observation. Figure XI is the above analysis with Superintendent Influence eliminated.

Figure XI. Multiple regression analysis with Aloofness as dependent variable and Autonomy 1, Communication as independent variables.

AUT1	COMM	ALO
Beta values		
-.19692	-.18743	
B-values		
-.18378	-.17408	

Constant A for the regression formula in raw score form = 68.7280

R = .28984 R-Sq = .08401

Standard error of estimate = 8.9011

F-Test value for hypothesis of R-Sq equal to 0 = 6.14494

T-Test values for betas

-2.35943	-2.24577

Degrees of freedom - 134.

In Figure XI it can be seen that another 1% loss in explained variance has been obtained over Figure X. Avoiding consideration of the question of whether or not an explained variance of 11% (Figure IX) is of value in the first place, we can conclude that the negative correlations (Figure III) of Autonomy 1 (-.223) and Communication (-.214) with Aloofness when taken in a multiple regression analysis do double the explained variance in Aloofness. This is consistent with the general hypothesis of this study.

Figure XII. Multiple regression analysis with Production Emphasis as dependent variable and Teacher Influence, Principal Commitment as independent variables.

TINF	PCOM	PRD
Beta values		
.12880	.11640	
B-values		
.10064	.09081	

Constant A for the regression formula in raw score form = 35.1261

R = .17496 R-Sq = .03061

Standard error of estimate = 7.7448

F-Test value for hypothesis of R-Sq equal to 0 = 2.11594

T-Test values for betas	
1.51418	1.36838

Degrees of freedom = 134.

In Figure XII it can be seen that no significant increase in explained variance has been obtained over the individual correlation analysis obtained in Figure III.

Figure XIII. Multiple regression analysis with Thrust as dependent variable and Autonomy 1, Principal Commitment, Conflict Toleration, Communication as independent variables.

AUT1	PCOM	CONT	COMM	THR
Beta values				
.05951	.16367	.10725	.14159	
B-values				
.05213	.14171	.09469	.12344	

Constant A for the regression formula in raw score form = 24.1346

R = .26313 R-Sq = .06923

Standard error of estimate = 8.4223

F-Test value for hypothesis of R-Sq equal to 0 = 2.45484

T-Test values for betas			
.69754	1.91656	1.26377	1.65746

Degrees of freedom = 132.

Figure XIV is the above with Autonomy 1 eliminated.

Figure XIV. Multiple regression analysis with Thrust as dependent variable and Principal Commitment, Conflict Toleration, Communication as independent variables.

PCOM	CONT	COMM	THR
Beta values			
.17043	.10630	.15031	
B-values			
.14757	.09385	.13104	

Constant A for the regression formula in raw score form = 26.1123

R = .25653 R-Sq = .06580

Standard error of estimate = 8.4378

F-Test value for hypothesis of R-Sq equal to 0 = 3.12299

T-Test values for betas		
2.01266	1.25515	1.78201

Degrees of freedom = 133.

Figure XV is the above with Conflict Toleration eliminated.

Figure XV. Multiple regression analysis with Thrust as dependent variable and Principal Commitment, Communication as independent variables.

PCOM	COMM	THR
Beta values		
.18350	.15936	
B-values		
.15888	.13893	

Constant A for the regression formula in raw score form = 29.8208

R = .23397 R-Sq = .05474

Standard error of estimate = 8.4876

F-Test value for hypothesis of R-Sq equal to 0 = 3.88011

T-Test values for betas	
2.17884	1.89226

Degrees of freedom = 134.

In Figure XIII it can be seen that when Thrust is taken as a fuction of Autonomy 1, Principal Commitment, Conflict Toleration, and Communication no significant increase in explained variance was obtained over the individual correlations (Figure III). Also, Figures XIV and XV do not show an appreciable change in explained variance over that obtained in Fgure XIII. No conclusions can be drawn.

Figure XVI. Multiple regression analysis with Consideration as dependent variable and Autonomy 1, Principal Satisfaction, Communication as independent variables.

AUT1	PSAT	COMM	CON
Beta values			
.07354	.18279	.12239	
B-values			
.05954	.14775	.09860	

Constant A for the regression formula in raw score form = 38.1229

R = .25340 R-Sq = .06421

Standard error of estimate = 7.8039

F-Test value for hypothesis of R-Sq equal to 0 - 3.04218

T-Test values for betas		
.86679	2.15647	1.43512

Degrees of freedom - 133.

In Figure XVI it can be seen that when Consideration is taken as a function of Autonomy 1, Principal Satisfaction, and Communication some increase in explained variance has been obtained over the individual correlations (Figure III). Since this increase is in the order of 2% and 1% no conclusions can be drawn. Figure XVII is the above with Autonomy 1 eliminated.

Figure XVII. Multiple regression analysis with Consideration as dependent variable and Principal Satisfaction, Communication as independent variables.

PSAT	COMM	CON
Beta values		
.18752	.13184	
B-values		
.15158	.10621	

Constant A for the regression formula in raw score form = 40.5299

R = .24275 R-Sq = .05892

Standard error of estimate = 7.8259

F-Test value for hypothesis of R-Sq equal to 0 = 4.19539

T-Test values for betas	
2.21899	1.56015

Degrees of freedom - 134.

In Figure XVII it can be seen that elimination of Autonomy 1 from the analysis in Figure XVI does not generate an appreciable change in the explained variance.

CONCLUSIONS

Halpin stresses the "heuristic nature of the organizational climates"[17] and suggests that:

> The important point is that the OCDQ provides us with a tool that will permit us to determine what other variables do indeed co-vary with a school's Organizational Climate.[18]

In this study it was postulated that the organizational structure of a school was a variable that would co-vary with a school's organizational climate. To test this postulate it was decided that principal's perceptions of certain aspects of the organizational structure of a school would provide a reliable measure. This required the selection of a paper-and-pencil interview schedule. It was decided that a viable influence on the organizational structure of schools was the Weberian construct of bureaucracy and that the two instruments developed by the Center for the Advanced Study of Educational Administration reflected, in part, measures of certain significant aspects of organizational structure. These measures were teacher autonomy, principal satisfaction with job,

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[17] Halpin, op cit, p. 224.

[18] Ibid., p. 202.

superintendent's influence on decision making in the school, principal's influence on decision making in the school, teachers' influence on decision making in the school, principal's commitment to the job, and the organization's ability to tolerate conflict.

A sample of one hundred thirty-seven elementary schools was obtained in Washington state. By this, measure of the Organizational Climate and the Organizational Structure of these schools were obtained. Through statistical analysis it was determined that a number of significant but low order single and multiple correlations were obtained. These correlations support the thrust of the general hypothesis of this study, but represent explained variance of such low magnitude as to make either generalizations or detailed discussion of implications an exercise in obfuscation.

To a considerable degree the significance of the findings of this study becomes a highly subjective matter. For, if the reader considers organizational climate to be an important part of organizations and that there is a certain parallelism between climate and personality, then he must also grant that being able to account for as little as 5-10% of the variance is of some value.

Appendix A - OCDQ, Form IV

Items That Compose Four Subtests: Teachers' Behavior

I. Disengagement

1. The mannerisms of teachers at this school are annoying.
2. There is a minority group of teachers who always oppose the majority
3. Teachers exert group pressure on nonconforming faculty members.
4. Teachers seek special favors from the principal.
5. Teachers interrupt other faculty members who are talking in staff meetings.
6. Teachers ask nonsensical questions in faculty meetings.
7. Teachers ramble when they talk in faculty meetings.
8. Teachers at this school stay by themselves.
9. Teachers talk about leaving the school system.
10. Teachers socialize together in small select groups.

II. Hindrance

11. Routine duties interfere with the job of teaching.
12. Teachers have too many committee requirements.
13. Student progress reports require too much work.
14. Administrative paper work is burdensome at this school.
15. Sufficient time is given to prepare administrative reports.
16. Instructions for the operation of teaching aids are available.

III. Esprit

17. The morale of the teachers is high.
18. The teachers accomplish their work with great vim, vigor, and pleasure.
19. Teachers at this school show much school spirit.
20. Custodial service is available when needed.
21. Most of the teachers here accept the faults of their colleagues.
22. School supplies are readily available for use in classwork.
23. There is considerable laughter when teachers gather informally.
24. In faculty meetings, there is the feeling of "let's get things done."
25. Extra books are available for classroom use.
26. Teachers spend time after school with students who have individual problems.

IV. Intimacy

27. Teachers' closest friends are other faculty members at this school.
28. Teachers invite other faculty members to visit them at home.
29. Teachers know the family background of other faculty members.
30. Teachers talk about their personal life to other faculty members.
31. Teachers have fun socializing together during school time.
32. Teachers work together preparing administrative reports.
33. Teachers prepare administrative reports by themselves.

Items That Compose Four Subtests: Principal's Behavior

V. Aloofness

34. Faculty meetings are organized according to a tight agenda.
35. Faculty meetings are mainly principal-report meetings.
36. The principal runs the faculty meeting like a business conference.
37. Teachers leave the grounds during the school day.
38. Teachers eat lunch by themselves in their own classrooms.
39. The rules set by the principal are never questioned.
40. Teachers are contacted by the principal each day.
41. School secretarial service is available for teachers' use.
42. Teachers are informed of the results of a supervisor's visit.

VI. Production Emphasis

43. The principal makes all class scheduling decisions.
44. The principal schedules the work for the teachers.
45. The principal checks the subject-matter ability of teachers.
46. The principal corrects teachers' mistakes.
47. The principal insures that teachers work to their full capacity.
48. Extra duty for teachers is posted conspicuously.
49. The principal talks a great deal.

VII. Thrust

50. The principal goes out of his way to help teachers.
51. The principal sets an example by working hard himself.
52. The principal uses constructive criticism.
53. The principal is well prepared when he speaks at school functions.
54. The principal explains his reasons for criticism to teachers.
55. The principal looks out for the personal welfare of teachers.
56. The principal is in the building before teachers arrive.
57. The principal tells teachers of new ideas he has run across.
58. The principal is easy to understand.

VIII. Consideration

59. The principal helps teachers solve personal problems.
60. The principal does personal favors for teachers.
61. The principal stays after school to help teachers finish their work.
62. The principal helps staff members settle minor differences.
63. Teachers help select which courses will be taught.
64. The principal tries to get better salaries for teachers.

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